

IN THE CLAIMS:

Please amend the claims as follows. The claims are in the format as required by 35 C.F.R. § 1.121.

1-16. Cancelled.

17. (Currently Amended) A method of ~~transmitting~~ communicating using a radio-frequency (RF) apparatus, comprising:

generating a first pulse signal;

generating a transmitting template signal wherein if the first pulse signal is a burst-mode signal, the magnitude of the autocorrelation of a signal generated from the convolution of the transmitting template signal and the first pulse signal approximates zero, and wherein generating the transmitting template signal comprises convolving a first template signal with a first set of code sequence elements, each of the first set of code sequence elements having a timing component and an amplitude component corresponding to the timing component;

generating an impulse train from the first pulse signal, wherein generating the impulse train comprises ~~convoluting~~ convolving the first pulse signal with ~~a first set of code sequence elements, each of the first set of code sequence elements having a timing component and an amplitude component corresponding to the timing component~~ the transmitting template signal;

transmitting the impulse train;

receiving a composite signal, wherein the composite signal comprises the impulse train and at least one multipath signal;

generating a receiving template signal for the composite signal ~~wherein if the composite signal is a burst-mode signal, the magnitude of the autocorrelation approximates zero, wherein generating the receiving template signal comprises convoluting~~ convolving a second template signal with a second set of code sequence elements, each of the second set of code sequence elements having a timing component and an amplitude component corresponding to the timing component;

correlating the receiving template signal with the composite signal to produce a detected signal; and

decoding the detected signal.

18. (Previously Presented) The method of claim 17, wherein the first set of code sequence elements comprises a Barker sequence.

19. (Previously Presented) The method of claim 18, wherein the second set of code sequence elements comprises a Barker sequence.

20-21. Cancelled.

22. (Currently Amended) A radio-frequency (RF)-~~apparatus~~ system, comprising:  
an RF transmitter operable to:

generate a first pulse signal,

generate a transmitting template signal wherein if the first pulse signal is a burst-mode signal, the magnitude of the autocorrelation of a signal generated from the convolution of the transmitting template signal and the first pulse signal approximates zero, and wherein generating the transmitting template signal comprises convolving a first template signal with a first set of code sequence elements, each of the first set of code sequence elements having a timing component and an amplitude component corresponding to the timing component;

generate a pulse train from the first pulse signal, wherein generating the pulse train comprises ~~convoluting~~ convolving the first pulse signal with ~~a first set of code sequence elements, each of the first set of code sequence elements having a timing component and an amplitude component corresponding to the timing component~~ the transmitting template signal,  
and

~~transmitting-transmit~~ the pulse train; and

an RF receiver operable to:

receive a composite signal, wherein the composite signal comprises the pulse train and at least one multipath signal,

generate a receiving template signal for the composite signal ~~wherein if the composite signal is a burst mode signal, the magnitude of the autocorrelation approximates zero,~~ wherein generating the receiving template signal comprises ~~convoluting~~ convolving a second template signal with a second set of code sequence elements, each of the second set of code sequence elements having a timing component and an amplitude component corresponding to the timing component,

correlate the receiving template signal with the composite signal to produce a detected signal, and

decode the detected signal.

23. (Currently Amended) The radio-frequency (RF)-~~apparatus~~ system of claim 22, wherein the first set of code sequence elements comprises a Barker sequence.

24. (Currently Amended) The radio-frequency (RF)-~~apparatus~~ system of claim 23, wherein the second set of code sequence elements comprises a Barker sequence.

25. Cancelled.

26. (New) The method of claim 17, wherein the second set of code sequence elements corresponds to the first set of code sequence elements.

27. (New) The radio-frequency (RF) system of claim 23, wherein the second set of code sequence elements corresponds to the first set of code sequence elements.